

WHAT IS CLAIMED IS

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1. A paint film mottling prediction method wherein a glitter representing value expressing properties of a brightness image of a paint film and color values of the paint film are substituted into  
10 a paint film mottling prediction formula, the method comprising:

15 a blending information acquisition step for acquiring blending information from paint film information of the paint film with reference to a blending information database that stores the blending information, and

20 a paint film information acquisition step for acquiring the glitter representing value and the color values of the paint film from the blending information with reference to a paint film mottling forecast database that stores the glitter representing value and the color values.

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2. A paint film mottling prediction method wherein a paint film mottling prediction formula is generated through a process comprising:  
30 an image generation step for generating a brightness image of the paint film by irradiating light to the paint film, and receiving the light reflected by the paint film,  
35 a glitter representing value calculation step for calculating a glitter representing value expressing properties of a brightness image generated at the image generation step,

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a color value acquisition step for acquiring the color values of the reflected light received at predetermined angles with reference to the incident angle of the light irradiated to the  
5 paint film, colorimetric measurement of the reflected light being separately carried out,  
a visual evaluation value acquisition step for acquiring the visual evaluation value of the paint film mottling of the paint film, the visual  
10 evaluation being separately carried out, and  
a paint film mottling calculation formula generation step for generating the paint film mottling calculation formula based on the glitter representing value calculated at the glitter  
15 representing value calculation step, the color values acquired at the color value acquisition step, and the visual evaluation value acquired at the visual evaluation value acquisition step.

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3. The paint film mottling prediction method as claimed in claim 1, wherein the paint film  
25 mottling prediction formula is generated using QSAR analysis.

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4. The paint film mottling prediction method as claimed in claim 1, wherein the glitter representing value is a sum of gray-scale gradation step values of the brightness image to which a  
35 spatial-frequency differential process is applied.

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5. The paint film mottling prediction  
method as claimed in claim 4, wherein the spatial-  
frequency differential process is one of a Sobel  
filter, a Roberts filter, and a Laplacian filter.

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6. The paint film mottling prediction  
method as claimed in claim 2, wherein the color  
values comprise at least one of a chroma value, an  
FF value of the chroma value, a brightness value, an  
15 FF value of the brightness value at the  
predetermined angles at which the light reflected by  
the paint film is received, a hue angle in the  
predetermined angles, and a hue angle difference.

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7. A computer-executable program for  
executing the paint film mottling prediction method  
25 as claimed in claim 1.

8. A computer-readable storage medium for  
30 storing the computer-executable program as claimed  
in claim 7.

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9. A paint film mottling prediction  
apparatus for predicting paint film mottling by

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substituting a glitter representing value expressing properties of a brightness image of a paint film and color values of the paint film into a paint film mottling prediction formula, the apparatus  
5 comprising:

a blending information database for storing blending information,

10 a paint film mottling forecast database for storing the glitter representing value and the color values,

blending information acquisition means for acquiring the blending information from paint film information of the paint film with reference to the blending information database, and

15 paint film information acquisition means for acquiring the glitter representing value and the color values of the paint film from the blending information with reference to the paint film mottling forecast database.

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